Building Sustainable Vector Control Programs

NACCHO Vector Summit
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Objectives

• Key components
• Review past
  • Path to sustainable programs
  • How we are set up
• Address challenges
• Highlight significant events
• If paying attention…
Mosquito control mandated by law: Title 26

- Mosquitoes transmit disease
- Cause nuisance
- Impact state economy

WNV, CHIKV, ZIKV reminders
John B. Smith
Rutgers Professor 1889-1912

- Studied problem
- Developed concept
- Proof of concept
- Drafted laws
Smith’s plan

• Local & State problem
  (Mosquitoes don’t recognize political boundaries)

• Mosquito commission in every county
  (Local Board of Health Powers)

• Focus solely on mosquitoes, no other duties

• Do all that was necessary, attack problem at source
  (remove the water, use natural predators, treat as needed, work w/ State)

• Rutgers annually review program
  Mosquito control based on science
Smith exits, Headlee enters

- Smith dies
- Bill passes
- Headlee hired
  - Organized MC in NJ
- NJMEA created 1913
  - Defend mandates
- AEMC created in 1921
- Mandates tweaked several times

T.J. Headlee ca. 1912
Organization

County Control Programs
Commissions, Departments, Agencies, Offices
Do the work

Balanced professional approach

State Gov. State Mosquito Control Commission
RU, DEP, DOH, AG, 6 Public

Advise Governor, Recommend changes to law, Funding, Guidance, Oversight

Agricultural Experiment Station
Research, Review P&E, Recommendations, Training
IVM components
(Integrated Vector Management)

- Continuing professional education
- Public education
- Mosquito & virus surveillance
- Source reduction
- Bio-Control
- Larviciding
- Pupiciding
- Aduticiding
- Insecticide resistance monitoring
- Annual reporting

Each program should have these components / abilities
2017 Resistance monitoring

- Had head start
- NACCHO survey majority programs deficient
- Core area
- Zika ELC capacity funding
- CDC bottle bioassay
- Coordinated workshop
- Attend workshop

SMCC supported event, Office Coordinated, partnered with Counties
Used infrastructure

- February BWG meeting
  - Reviewed needs, supplies, protocols, egg collection and rearing
  - Followed up w/reminders
- July, 2 day workshop
  - Training & bottle bioassay run
  - Programs supplied mosquitoes
    - Colony on hand
  - Shared data w/ CDC
- August & October
2018 workshop

• Used biologist group
  • Provided offseason updates
  • Shared CDC kit info
  • June refresher egg collection and larval rearing

• September workshop
  • Programs supplied mosquitoes
    • Did not have colonies
  • Tested A.I.
  • WNV season ongoing

• 3 programs ran assays following week
2019 workshop plans

- Continue supporting program
- Tweak (standardize) as needed
  - CDC kits were great, A.I. available
- Have $ to supplement equip. & supplies
  - Insect cages, desiccators, incubators, etc.
  - Focus efforts for success rearing mosquitoes
- October is likely a better time
  - Goal is to increase # of populations screened
  - Encourage programs to work on their own
  - Generate annual data that can be shared

Small investment in time and money helps all
Continuing professional education

- Training
- Webinars
- Professional associations
- Journals
- CoEs

More and more opportunities
Public education & outreach

• Service requests & inspections
• Presentations
• Press release
• Social media
• Webinars

Don’t know we exist!
Mosquito and virus surveillance

- Monitor rain & tides
- Trapping
- Species ID
- Arbovirus testing (Mosquitoes, birds horses)
- IR monitoring

Foundation driving management decisions
Mosquito control services

• Are designed to prevent public health emergencies

• Nuisance control facilitates disease prevention

• Increases outdoor activity while improving quality of life

• Requires consistent annual funding

Ongoing year round IVM operations achieve this goal
Reporting
(Plans & Estimates and Annual Reporting)

- Gets back to Smith
- Annual submission of work plan
- Have it reviewed by an outside entity
- Science based solutions
- Work cooperatively in the public interest

Accountability
Need resources to address IVM

- Identify purse strings
- Forge a path
- Be the expert
- Earn their trust
- Make your case
- Grow the program

Be patient, but keep moving forward
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Mosquito control is everybody’s responsibility. It’s a big job & everyone needs to do their part!